

Special Feature

Technology cannot be viewed as a separate entity within either the military or society in general. This illusion of discreteness simply does not exist. It is and will remain an integral part of both. The real issue is to recognize that technology is a tool with limitations, and these limitations should be considered in reacting to particular situations.

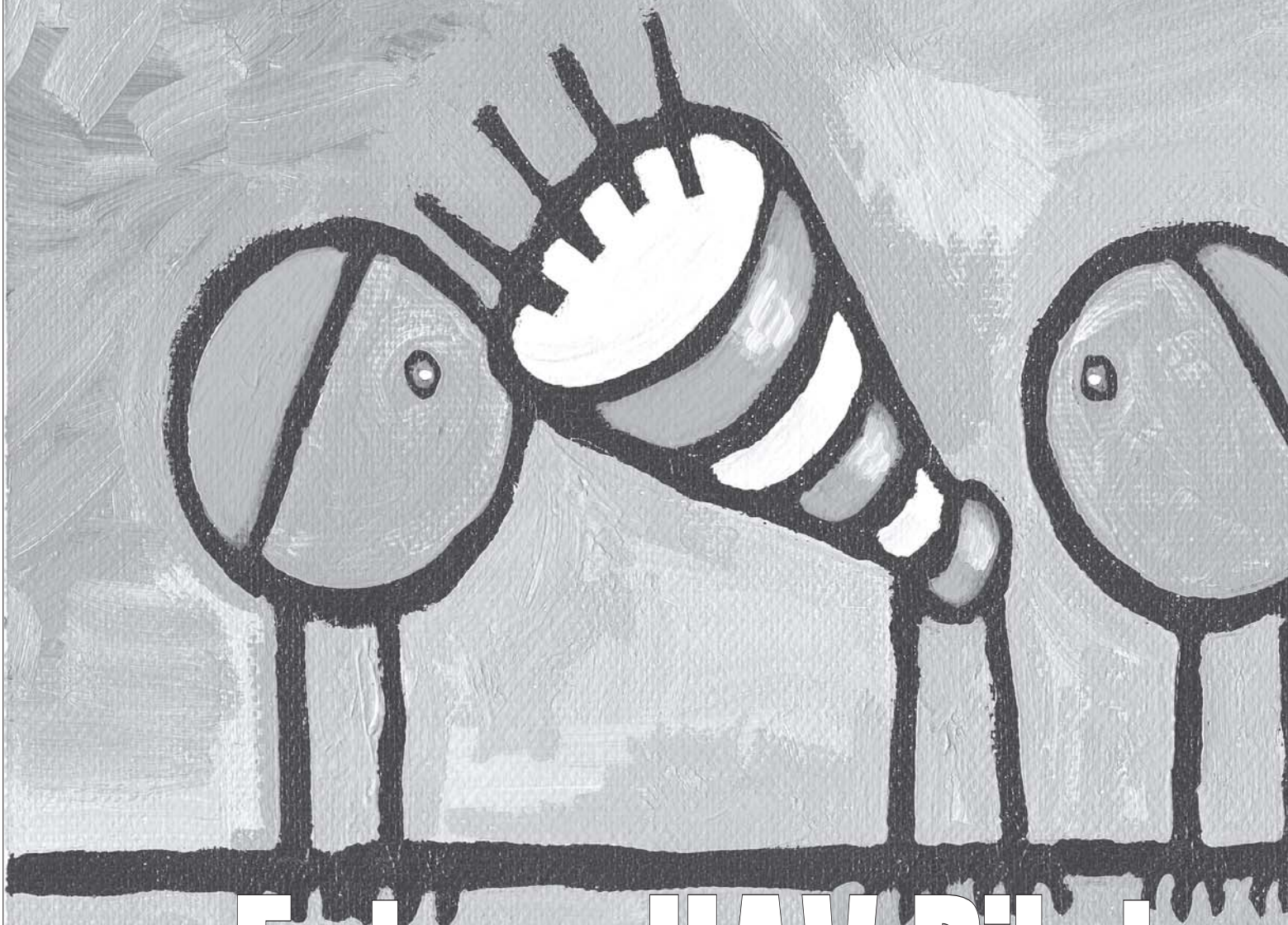
21st century logistics

Future UAV Pilots: Are Contractors the Solution?

RFID Technology: Is the Capability a Boon or a Burden for DoD?

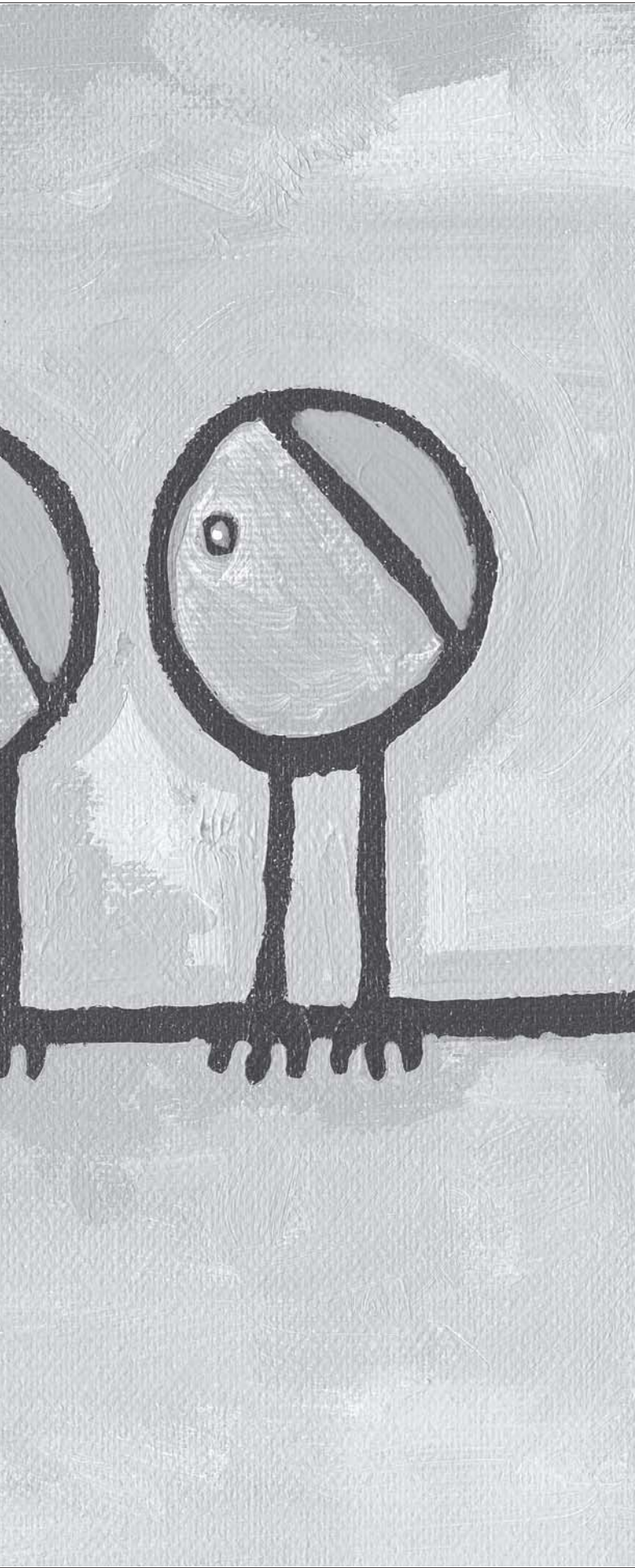
Two evolving facets in the fabric of military logistics—technology (to include technological change and technological innovation) and the increasing use of contractors covers a lot of ground and often enjoins heated debate. Each has been looked on as a major tool for dealing with problems seen at the end of the 20th century and now in the 21st century. Recent changes—order of magnitude changes—in technology have led to both long-range and strategic planning efforts that integrate current and future technological advances into operational concepts. Similarly, the military has been expanding the use of contractors and contractor support into quasimilitary areas.

One such area is operating and maintaining unmanned aerial vehicles (UAV). In the first feature article—in the edition of the *Journal*, the authors examine several of the key issues associated with UAV operations—predeployment training, combatant status, and command authority. In the second feature, one particular aspect of technology is examined—radio frequency identification (RFID). From a Department of Defense perspective, the authors argue that RFID technology must be harnessed to ensure sustainment systems are able to support military forces in the transformation environment. They also examine the challenges associated with implement RFID technology.



Future UAV Pilots Are Contractors the Solution?

The United States may find itself making even greater use of quasimilitary contractors to do a great deal of what looks like military business; for example, flying and maintaining UAVs. The use of contractor UAV pilots raises numerous issues such as predeployment training, combatant status, and command authority.



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Introduction

During the first-ever combat deployment of the RQ-4A Global Hawk unmanned aerial vehicle (UAV) in support of Operation Enduring Freedom, 56 contractors deployed as part of an 82-member military, civil service, and contractor team. Several of these contractors were needed to operate the vehicle during combat operations and served as Global Hawk pilots.¹ This was repeated during Operation Iraqi Freedom. Contractor participation in military affairs is not new. Contractors have supported military operations since the Continental Army. This support role has evolved over

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the years, with contractors now conducting combat-type operations. With the recent push for streamlined acquisition practices and spiral development, contractors will remain the initial cadre and best trained experts for all future UAV systems, systems that may be deployed into the combat arena well before initial operational beddown or trained military operators are available.

A contractor deployment force brings unique capabilities to the combat arena but creates unique situations for the deployment commander. Consequently, deployment commanders need to understand their role and responsibilities in preparing contractors for a combat deployment. Once deployed, the deployment commander and contractor need to understand their roles and responsibilities with respect to command authority, rules of engagement, force protection, and the basic care and feeding of the team. More important, the deployment commander needs to understand the numerous legal issues created with respect to the contractor pilots' combatant status, prisoner-of-war (POW) status, and the legal status with respect to the host nation's legal system.

If the United States is going to continue using contractor UAV pilots in combat operations, there are three options available to clarify the role, relationship, and responsibility of the deployment commander and contractor workforce. First, the United States can do nothing and assume the risk of using potential unlawful combatants, with possible criminal repercussions against these individuals and those who direct their operations. Second, the United States could implement a sponsored reserve program, which places a portion of the contractor force in a military reserve status. This status allows for the callup of contractors to military active-duty status if their specialized combat support is needed. Finally, the United States can try to alter the treaties and redefine

lawful combatants, a process that would be expected to take some time.

Contractors in Combat: Here to Stay

Throughout history, civilians have played an important role in military operations. Over time, their role has transformed from battlefield support to combat operations. As technology becomes more complex and the military continues to downsize, contractors will play a greater role in combat operations, a role that is sure to increase as the Department of Defense (DoD) strives to field weapon systems sooner.

From the Revolutionary War to Gulf War II

In the 18th century, contractors served in many tasks—as carpenters, engineers, and wagon drivers in support of the Continental Army.² Their efforts allowed the soldiers to focus on warfighting-related tasks. The contractors' role has evolved over the years, and their participation in the combat arena has increased. During Operation Desert Storm, 9,200 contractors deployed to support military operations.³ Their roles have increased over the years, to include airborne support operations. During Operation Joint Endeavor over Bosnia, contractor

increased to one out of ten in support of Bosnia operations.⁵ As our active-duty military force downsizes, privatization of military functions increases. From 1989 to 1999, the active-duty force was reduced from 2,174,000 to 1,453,000.⁶ Meanwhile, the military continued to fill its inventory with sophisticated equipment, increasing the military's dependency on civilian specialists or contractors. "Highly technical and complex weaponry is flooding the Armed Forces, requiring contractors to be hired to train military operators and maintain and operate the systems."⁷ Consequently, civilian contractors play an important role in current military peacetime and contingency combat operations. Recent operations in support of Operations Enduring Freedom and Iraqi Freedom have used contractors in a variety of roles, from logistics support to UAV operations. This dependency or support was not unexpected but fully supported by the DoD. In a letter to all Air Force program executive officers (PEO), the Principal Deputy Assistant Air Force Secretary for Acquisition and Management emphasized the Air Force's desire for elevated contractor support. This individual wrote:

I will support you (PEOs) in the liberal use of undefinitized contract actions, urgent and compelling justification and authorizations, options for increased quantities, accelerated delivery options, and

As technology becomes more complex and the military continues to downsize, contractors will play a greater role in combat operations, a role that is sure to increase as the DoD strives to field weapon systems sooner.

personnel conducted airborne surveillance missions as crewmembers on the Joint Surveillance Target Attack Radar System Aircraft.⁴ By 1996, the civilian-to-military ratio had

so forth...to ensure your government-contractor teams are geared up for this war effort.⁸

This commitment was echoed throughout the DoD. According to Secretary of Defense Donald H. Rumsfeld, "During Operation Iraqi Freedom, more than 80 percent of civilians deployed in the theater of operations were contractors."⁹ Such contractor commitments enabled the first-ever combat deployment of the RQ-4A Global Hawk. Today, the contractor's role has transitioned from support to conducting actual combat reconnaissance missions as Global Hawk UAV pilots were utilized during combat reconnaissance missions.

The Global Hawk is a high-altitude, long-endurance UAV designed to provide the joint force commander an extended reconnaissance capability through sustained high-altitude surveillance and reconnaissance. It can operate at ranges up to 3,000 nautical miles from its home or deployed base, with loiter capability over the target area exceeding 24 hours at altitudes greater than 60,000 feet. The Global Hawk carries a synthetic aperture radar and electro-optical (EO) and infrared sensors simultaneously, which provide broad coverage and continuous spot coverage. The aircraft is designed to operate autonomously but allows man-in-the-loop control at all times from a ground-based mission control element (MCE). This command-and-control facility can be located throughout the world from within



Figure 1. RQ-4A Global Hawk Over California

the area of operations or the continental United States (CONUS). Global Hawk's first flight occurred on 28 February 1998 from Edwards AFB, California.¹⁰ In November 2001, in support of Enduring Freedom, 56 Global Hawk team contractors, including 5 contractor pilots deployed, in support of Enduring Freedom, alongside a few military counterparts.¹¹

Prior to Enduring Freedom, in March 2001, the Global Hawk program "entered the first phase of formal defense system acquisition program," completing its advanced concept technology demonstration (ACTD).¹² The first developmental test aircraft has yet to be delivered to the Air Force Materiel Command for developmental flight testing, and its initial operational capability (IOC) date was not expected until sometime in 2006.¹³ However, six RQ-4A Global Hawk aircraft have been built. During the ACTD, the Global Hawk demonstrated the ability to conduct high-altitude, precision reconnaissance during extended flights and conducted deployments to Eglin AFB, Florida, and to a Royal Air Force base in Adelaide, Australia, from Edwards AFB.¹⁴ Because of these proven, yet limited, capabilities, it was sent to support both Enduring Freedom and Iraqi Freedom. Since these deployments occurred well in advance of its initial operating capability, the majority of pilots were contractors who were needed to conduct the actual combat missions.¹⁵ According to Major General Joseph P. Stein, director of aerospace operations for Air Combat Command, "The Air Force's RQ-4A Global Hawk UAV generated 55 percent of the targeting data used to destroy time-sensitive targets in Iraq during Gulf War II."¹⁶ Now contractors were conducting combat missions.

A Greater Role in the Future

This trend of deploying nonoperational weapon systems with direct combat contractor support only will increase in the future for multiple reasons, including Air Force manning practices, accelerated acquisition times, and further UAV concepts of operations (CONOPS) maturity. With respect to Air Force manning, changes are already in the works to produce UAV operators who will be assigned these duties as their first operational flying assignment. Secretary of the Air Force James G. Roche stated, "We recently directed that the Air Force reengineer navigator training to produce airmen equally proficient in employing both manned aircraft and UAVs. They will be known as combat system operators."¹⁷ Until this training pipeline is functional and producing combat system operators, UAV pilots are former manned aircraft pilots or navigators,¹⁸ who then undergo UAV-specific training. Regardless of the source of the UAV, the Air Force system is unable to provide military-trained UAV pilots to support unplanned combat deployments that occur during initial testing or concept development. Normally, the Air Force will not begin to man up the first operational unit until after a developmental weapon system is nearing completion of developmental test and evaluation. For example, the 12th Reconnaissance Squadron at Beale AFB, California, was designated the first Global Hawk operational squadron. Although the 12th was activated in October 2001, the first pilots were not programmed to arrive until January 2003. By this time, Global Hawk had flown more than 1,000 combat hours in support of the Global War on Terrorism,¹⁹ and these pilots still had to undergo a 6-month training program before they were combat ready. Consequently, the only UAV pilots available to conduct combat operations were a handful of developmental/operational test pilots and contractor pilots. This time line for

Article Highlights

Contractors play an important role in military operations.

A contractor deployment force brings unique capabilities to the combat arena but creates unique situations for the deployment commander. Consequently, deployment commanders need to understand their role and responsibilities in preparing contractors for a combat deployment. Once deployed, the deployment commander and contractor need to understand their roles and responsibilities with respect to command authority, rules of engagement, force protection, and the basic care and feeding of the team. More important, the deployment commander needs to understand the numerous legal issues created with respect to the contractor pilots' combatant status, POW status, and the legal status with respect to the host nation's legal system.

manning an operational squadron will remain in place. If the Air Force were to allocate personnel and unit startup funding for every advanced concept demonstration program, well prior to a proven system demonstration of its initial system capabilities, legacy operational units' manning and funding would suffer greatly. The Air Force would waste an undetermined amount of money through this early startup if a demonstration did not go as planned or failed completely.

Another factor that will increase our reliance on UAV contractor pilots is the DoD's push to field new weapon systems quicker. Rumsfeld wants to reduce system acquisition times since "program start to initial operational capability is generally more than 8 years"²⁰ and, too often, stretches to 15 or 20 years for major weapons.²¹ "The need to introduce new weapon systems swiftly is clear," stated Rumsfeld. He added, "The present weapon systems acquisition process...is ill-suited to meet the demand posed by an expansion of unconventional and asymmetrical threats in an era of rapid technological advances and pervasive proliferation."²² Rumsfeld selected evolutionary acquisition or spiral development as the preferred approach to buying future weapon systems or weapons. Practically speaking, spiral development is done to provide rapid development of a project

with quicker fielding of the system,²³ knowing there will be a less-than-perfect system in the beginning. This initial system will be able to meet some, but not all, of the user's requirements. Consequently, contractor pilots will play a greater role in combat operations if their particular weapon system demonstrates a unique capability early in the program. Such a possibility exists with the X-45 unmanned combat aerial vehicle (UCAV) demonstration program ongoing at Edwards AFB.

The UCAV program is a joint effort "to demonstrate the technical feasibility, military utility, and operational value of a UCAV system to effectively and affordably prosecute 21st century lethal and nonlethal suppression of enemy air defenses and strike missions within the emerging global command and control architecture."²⁵ Similar in size to an F-117 but with the low-profile, flying-wing design of a B-2, the X-45 will operate in the same flight environment as manned fighter aircraft, which currently conduct suppression of enemy air defense missions. The X-45 is designed for internal carriage and release of two 2,000-pound joint direct attack munitions.²⁶ Like the Global Hawk, the UCAV is designed to operate autonomously with a pilot monitoring its activities from a ground-based command and control shelter. If necessary, the pilot can interrupt the autonomous flight and control the vehicle. The X-45 first flew in May 2002. Now the X-45 UCAV program is completing a demonstration to validate its ability to release a precision-guided munition and destroy a ground target representing a surface-to-air missile site or associated command-and-control facilities. "The DoD envisions employing UCAV weapon systems in the post-2010 battle space to augment the manned force structure on high-risk, high-priority missions where mission success and survivability are key."²⁷ Once the UCAV demonstrates the ability to destroy ground targets and a high-priority, high-risk mission exists, expect the UCAV to be called into action prior to operational fielding, just like Global Hawk. Although two military pilots are undergoing training, contractors are operating these vehicles, and the majority of initial operators are contractor pilots. If tasked to support combat operations, the deployment team, including the pilots, will consist primarily of contractors.

The military's reliance on UAV contractor pilots will continue to grow based on UAV CONOPS maturity, particularly with respect to UAV reachback operations. Reachback is "a concept that enables wide geographic separation of a UAV and its command-and-control element using satellite communications and a terrestrial wide area network."²⁸ Basically, reachback allows the military to perform UAV intelligence, surveillance, and reconnaissance collection missions over a remote area of responsibility from halfway around the world. During Iraqi Freedom, the Global Hawk was controlled from the United States while conducting combat reconnaissance missions over Iraq. According to the *Washington Times* and an Air Force source, "Global Hawk played an extraordinarily important role in focusing precision airpower," an Air Force source said yesterday, estimating that it quickened the Republican Guard's defeat by several days and is responsible for scores of tank kills."²⁹ Such precision airpower would not have been possible without UAV contractor pilots. Although some pilots were required to deploy forward, the majority of the UAV pilots were able to remain stateside and conduct combat missions. Reachback, depicted in Figure 3, is favorable to both the military and the contractor. The



Figure 2. The X-45 Unmanned Combat Aerial Vehicle²⁴

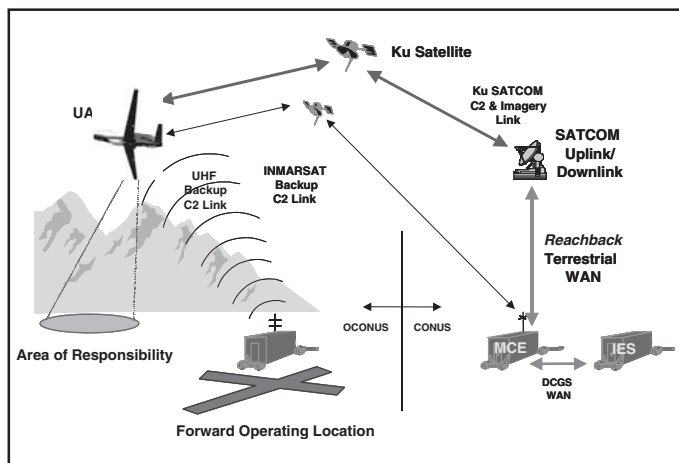


Figure 3. Reachback Command-and-Control Path³⁰

military is content because of the reduced logistical footprint and minimal predeployment training requirements. The contractor is satisfied since fewer people will be deployed to a combat area, and more contractor pilots may agree to participate. Overall, this concept easily lends itself to a greater role of UAV contractor pilots in combat operations.

Legal Implications

The trend for the Air Force to rely more and more on contractor UAV pilots has raised numerous legal issues: combatant status with respect to the Law of Armed Conflict (LOAC), POW status, and the contractors' role with respect to status of force agreements (SOFA). The deployment commander must understand the legal implications of utilizing contractors as UAV pilots and the contractors' status with respect to international and host-country laws.

Civilian Vice Contractor

Prior to addressing legal issues raised with respect to using contractors in combat operations, the term contractor must be defined with respect to other civilian designators. Normally, civilians fall into three categories: DoD civilian employees, nonaffiliated civilians, and contractors. DoD employees encompass civilian support personnel, the American United Services Organization, and civilian aircrew members. Nonaffiliated civilians are those civilians who share common interests with the military and include the media, nongovernmental organizations, private voluntary organizations, and intergovernmental organizations. Contractors are those individuals or employees of an organization under

Conventions, "Members of the armed forces of a party to a conflict are combatants; that is to say, they have the right to participate directly in hostilities."³⁴ For clarification, a member of the armed forces or military is someone who meets all the following conditions:

- Be commanded by a person responsible for his subordinates.
- Have a fixed distinctive emblem recognizable at a distance.
- Carry arms openly.
- Conduct operations in accordance with the laws and customs of war.³⁵

Consequently, if an individual takes part in hostilities without being a member of the armed forces (does not meet all of the four previously mentioned criteria), that person is an unlawful combatant, not just a noncombatant. An unlawful combatant is an individual who is not authorized to take part in hostilities but does so anyway whereas a noncombatant is a person who is not authorized to take an active role or direct part in hostilities and does not.³⁶ The key term here is *does not*. If they are noncombatants and take a direct or active role in hostilities, then they are unlawful combatants. Civilians who accompany the force in deployed military operations are considered noncombatants. According to the Air Force, "Civilian contractor personnel accompanying Air Force forces are not combatants and must not be allowed to act as combatants during Air Force operations."³⁷

As stated earlier, Global Hawk contractor pilots conducted combat reconnaissance missions during both Enduring Freedom and Iraqi Freedom.³⁸ A determination whether they are lawful combatants, unlawful combatants, or noncombatants requires a

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contract with the DoD.³¹ This article focuses on contractors. Contractors traditionally are split into three categories: deployed systems contractors, external theater support contractors, and internal theater support contractors. The Air Force General Counsel defines deployed systems contractors as "US companies that provide operational support to military systems (for example, Predator, Global Hawk) wherever those systems may be deployed in the world."³² For this article, UAV contractor pilots will be considered deployed systems contractors even if conducting UAV operations stateside via reachback operations.

International Law and the Contractor

An important aspect of the Law of Armed Conflict is the distinction it creates between combatants and noncombatants. Combatants are "those persons who have the right under international law to participate directly in armed conflict during hostilities."³³ According to Article 43(3) of the Geneva

review of the LOAC's definition of combatants stated earlier. First, contractor pilots need to have the right to take part in hostilities, a right only granted to the military. Recall those four rules for identifying a military member. "The requirement for distinctive emblems (most often a uniform) and carrying arms openly exists to distinguish combatants from noncombatants."³⁹ Plus a defined chain of command is necessary primarily for discipline and to ensure operations are done in accordance with international law. Although they were contractor personnel accompanying the military force, they were not an integral part of the military or a separate military force. Consequently, UAV contractor pilots who conduct reconnaissance missions in Iraqi Freedom and Enduring Freedom could be considered as taking direct part in hostilities in violation of the Laws of Armed Conflict, making them unlawful combatants. As an unlawful combatant, a UAV operator who conducts combat missions (participating in hostilities) could be prosecuted as a criminal.⁴⁰

Of course, some will argue that UAV pilots still can be considered noncombatants since their reconnaissance missions do not impact the enemy forces or the enemy facilities directly. However, the US military takes a firm stance in its definition of direct participation to even include lookouts or guards as direct participants. The Air Force further stated, "Being a member of a weapons crew or...a crewman on a military aircraft in combat" is active participation.⁴¹ Consequently, it is easy to deduce that people who control reconnaissance vehicles over enemy territory are participating in hostilities whether they are in the same area of operations or stateside. By collecting reconnaissance information, they intend to destroy or disrupt the enemy or various enemy capabilities.⁴² Finally, had the UAV been declared operational and beddown at an operational base, contractor pilots would have been replaced with military pilots, indicating the military's desire to conduct combat operations with lawful combatants only. These are just a few reasons to implicate contractor UAV pilots who are conducting a combat mission as unlawful combatants.

POW Status

Equally important is determining what protection would be offered contractors if they are taken as prisoners of war. Article 4 of the Third Geneva Conventions describes how members of an armed force, as well as persons who accompany the armed forces

contractor personnel. A SOFA is defined as "Any type of binding international agreement that seeks to order and arrange the competing legal and jurisdictional claims of receiving and sending states."⁴⁸ These SOFAs are necessary since they are legally binding, international agreements that create a legal status that, absent the agreement, would not otherwise exist. Currently, only 5 of 109 SOFAs contain language that addresses contractors who support military operations.⁴⁹ Deployment commanders should seek the same protection or legal status for their contractor workforce that is afforded military personnel. The State Department is responsible for this SOFA; therefore, they should be contacted for assistance. Without a SOFA, the contractor is basically a tourist in the deployed or host country and subject to all the host nation's laws.

Conducting Contractor Operations

Preparing a military or contractor team for deployment of an established weapon system is not an unusual experience. Preparing for a combat deployment with a weapon system, which has not even reached its first operational base, is a whole different story.⁵⁰ Such a system still may be in concept development with unique support equipment, undocumented procedures, and a workforce primarily made up of contractors.

Combatant status and POW treatment deal primarily with international law.

without actually being members thereof, are entitled to POW status.⁴³ Army Field Manual 100-10-2 states, "If captured, a contractor's status will depend upon the type of conflict, applicability of any relevant international agreements, and the nature of the hostile force."⁴⁴ Normally, a contractor would be considered a noncombatant, and all noncombatants are protected persons and are afforded some level of enhanced protection under the Law of Armed Conflict.⁴⁵ As determined in the preceding paragraph, the UAV contractor pilots could be considered unlawful combatants. Although they may retain POW status, they could be tried for war crimes.⁴⁶ According to the US Supreme Court:

Lawful combatants are subject to capture and detention as prisoners of war by opposing military forces. Unlawful combatants are likewise subject to capture and detention, but in addition, they are subject to trial and punishment by military tribunals for acts which render their belligerency unlawful.⁴⁷

Status of Force Agreements

Combatant status and POW treatment deal primarily with international law. The deployment commander must understand the relationship contractors will have with the host nation's laws and legal system. One of the greatest challenges facing the deployment commander of contractor personnel is determining the contractor pilot's status while in the deployed country with respect to legal agreements or SOFAs. Deployment commanders need to work this issue with the staff judge advocate's office as soon as they are notified of an upcoming deployment that utilizes

Employing a developmental aircraft without combat crew training, validated and verified technical data, and operations guidance is not routine and may create concern among crews accustomed to robust training and compliance with Air Force and major command instructions and policies.⁵¹

Military deployment commanders need to understand their roles and responsibilities in preparing the entire team, including contractors, for a combat deployment and in carrying out the mission while deployed.

Team Preparation

Once a decision has been made to deploy an unfielded UAV system, the contractor pilots need to be treated just like military pilots in preparation for a deployment. According to Joint Publication (JP) 1-0, "DoD civilians and contractor employees deployed for military operations will be provided the same support and services provided their military counterpart."⁵² Commanders will provide the necessary resources to support, train, clothe, equip, and sustain the civilian workforce in the operational area. Contractors need to undergo various forms of training, receive intelligence and legal briefings, be issued equipment, and ensure they are medically fit to deploy. The military will provide nuclear, biological, and chemical defense training, basic first aid and firearm safety to the contractor.⁵³ Weapons certification may or may not be accomplished for the contractors, as contractors will be issued firearms for self-protection only. According to JP 1-0, commanders, with approval from combatant commanders, may issue contractor personnel

firearms when unusual circumstances exist and the contractor has received the necessary training.⁵⁴ Since training may not be available once deployed, the local commander may want to conduct weapon certification. The judge advocate or legal office needs to explain Geneva Convention provisions, the Uniform Code of Military Justice (UCMJ), and the Code of Conduct.⁵⁵ Normally, base readiness or mobility personnel will conduct this training. However, the base readiness section may not be able to support such an unexpected training requirement. With a stable, fielded weapon system, the mobility or readiness officer already has identified those military or DoD civilians who will deploy and assigned them to various mobility positions. Within this system, the mobility officer is able to track completed training, forecast training requirements, and meet the training demand with an adequate number of instructors and trainers and class dates. The same logic applies to equipment. With an established system and deployment personnel previously identified, equipment will be stockpiled on base or at a known location. The deployment commander may need to borrow equipment from other bases and create a unique training schedule to train and equip the deployment force. When a contractor force on a concept development or pre-operational weapon system requires deployment training and equipment issue, the deployment commander needs to remain flexible and become creative in scheduling training and acquiring the necessary deployment equipment.

The base medical support agencies will conduct medical and dental examinations; psychological evaluations to ensure fitness of duty and HIV testing are optional.⁵⁶ These examinations can overwhelm the base medical support team, depending on the time line and size of the deployment team, just like the base readiness employees. Information produced from the medical exam is critical in determining the overall wellness of contractors and their deployability status. A traditional military member's health status is well-documented whereas a contractor's overall health condition is an unknown. Certain inoculations could do more harm to the contractor than good. It is imperative that contractors undergo physical fitness and medical exams once they are notified of a possible deployment. The Air Force medical team also will inoculate contractors with the necessary immunizations for the specific country they will deploy to. Depending on the demand, this requirement can overwhelm a base's supply system. Anthrax and smallpox vaccinations are mandatory.⁵⁷ Refusal of certain inoculations may result in a nondeployable status. The requirement for these numerous inoculations makes the fitness exam a definite requirement. The deployment commander needs to be prepared to insert other contractors into the deployment team as existing team members are classified nondeployable. Once again, flexibility and resourcefulness are key.

Just like military personnel, contractors will require official identification cards that will serve to record their Geneva Convention status. Contractor pilots will be issued a DoD Form 489, Geneva Conventions Identity Card, or common access card, which contains similar information, along with personal identification tags (dog tags). These tags will contain full name, social security number, blood type, and religious preference. Contractors are required to wear these identification tags at all times when deployed, just like their military counterparts.⁵⁸ Although identification tags are mandatory, contractor uniforms are optional. The contractor must not wear a uniform except for

unique circumstances. If uniforms are worn, commanders are to ensure contractor uniforms are clearly distinguishable from military uniforms.⁵⁹ "Contractors who accompany the force are not authorized to wear military uniforms, except for specific items required for safety or security, such as chemical defense equipment, cold weather equipment, or mission-specific safety equipment."⁶⁰ Uniforms are used to distinguish combatants from noncombatants or enemy combatants.

The military will provide legal assistance for deploying military personnel to produce a last will and testament, power of attorney, or other necessary legal documents (when a lengthy absence is expected). "Contractor personnel generally will not be eligible to receive legal assistance from military or US government civilian attorneys."⁶¹ However, such legal assistance may be made available for combat deployments if it is included in the contract that covers the deployment. Regardless, the deployment commander needs to ensure deploying contractors have their legal needs in order. Still, there are outstanding issues, which are not easily addressed, such as life insurance. Since the "military environment is inherently dangerous and may result in death or personal injury"⁶² to the contractor or damage to the contractor's property, life-insurance companies are reluctant to provide insurance for individuals in a combat zone. Once in combat conditions, the contractor's life-insurance policies may be voided or the premium driven sky high. According to Mike Klein, president of MMG Agency, Inc, a New York insurance firm, "Insurance rates for civilians skyrocketed—from 300 percent to 400 percent more than normal."⁶³ There is the possibility a deployed contractor may be entitled to compensation from the Government or from the contractor's company insurance policy. This is a complex topic and requires a review of the Longshore and Harbor Workers Compensation Act,⁶⁴ Defense Base Act, and War Hazards Compensation Act.⁶⁵

Deployment Practices and Procedures

Once deployed, deployment commanders need to fully understand their role and responsibilities with respect to force protection, the basic care of their mixed military contractor team, command authority, discipline, and rules of engagement. The terms of the governing contract will dictate how deployment commanders handle numerous situations. The deployment commander's primary concern is the safety of the team. Depending on the situation, force protection of contractors is the responsibility of the contractor, the chief of missions⁶⁶ to the country deployed, or the deployment commander. Issues related to force protection off base might require discussions with host-nation officials and contracting officers. These issues may be addressed in the SOFAs. During some contractor deployments, contractors have resided in off-base quarters that do not offer protection and create significant force-protection concerns.⁶⁷

Deployment commanders must take care of their team in country with respect to basic necessities.

Generally, the terms of contracts that contemplate performance in deployed locations will dictate that living conditions, privileges, and limitations of contractor personnel should be equivalent to those of the units supported unless the contract with the Government specifically mandates or prohibits certain living conditions.⁶⁸

The military may provide for basic necessities such as lodging, food, and transportation in country, but these issues need to be identified in the contract.⁶⁹ Medical care for contractors may be

made available during contingency operations,⁷⁰ but again, the specifics, including level of care, must be covered in the contract.

The greatest challenge to deployment commanders is in understanding their command authority with a contractor workforce. According to Air Force Pamphlet (AFP) 10-231, civilians may be subject to military law when serving with or accompanying an armed force *in time of war*. However, the US Supreme Court has ruled *in time of war* to mean a congressionally declared war and not contingency operations.⁷¹ If war is declared, civilians will be subject to the UCMJ. This allows the military commander, who is responsible for those activities in which contractors are participating, to discipline the contractors when necessary. The last time Congress declared war was in 1941 as America entered World War II. Since then, the United States has been involved in military operations other than war or contingency operations without an official declaration of war. Without this war declaration, military commanders have no command authority over contractor personnel. A contractor cannot be ordered to do anything, including the services defined in a contract. "The warfighter's link to the contractor is through the contracting officer or the contracting officer's representative."⁷² "Control of civilian contractor personnel is tied to the terms and conditions of the government contract; therefore, key performance requirements should be reflected in the contract."⁷³ Consequently, the deployed commander needs to understand fully the contractual relationships as outlined in the contract. The wording in this contract impacts a variety of areas, including basic needs, medical assistance, and security arrangements. The contracting official needs to fully document command authority and disciplinary actions and procedures in the contract, which guide deployed contractor actions.

"This lack of command authority over civilian contractors presents a burden on commanders who are accustomed to having their orders carried out."⁷⁴ The contract may not cover all contingencies. Consequently, contractor actions may be detrimental to the operation, but commanders may have no recourse for discipline as they would with a military member. During Iraqi Freedom, "US troops suffered through months of unnecessarily poor living conditions because some civilian contractors hired by the Army logistics support failed to show up."⁷⁵ According to Peter W. Singer, author of *Corporate Warriors*, "Untrained civilians can walk off the job any time they want, and the only thing the military can do is sue them later on."⁷⁶ The contract does not provide penal authority for military commanders to enforce orders to civilian personnel.⁷⁷ Although deployment commanders may not have UCMJ authority over their contractor workforce, they may have *hire and fire* authority, if stipulated in the contract. If the commanders are not satisfied with the performance of a particular contractor, they can have that person removed from the deployment team. The loss of a job and related source of income may be a significant motivator for the contractor to conform to the rules and regulations or demands of the commander.⁷⁸

A major area of concern for the commander when dealing with aircraft operations is adherence to rules of engagement (ROE). All military aviators have received ROE training since their initial operational assignment. Contractor pilots need to be educated on rules of engagement and need to comply with these rules. ROE are defined as "Directives issued by competent military authorities that delineate the circumstances and limitations under

which US forces will initiate or continue combat engagement with other forces encountered."⁷⁹ Rules of engagement ensure that national policies and objectives are reflected in the action of the commanders in the field. Since the deployment commander will rarely, if ever, have UCMJ authority over contractors, specific criteria need to be identified in the contract to ensure contractors comply with the rules of engagement and what actions the commander can take if ROE violations occur. Similar contract clauses need to be developed that discuss LOAC violations and failure to perform. Contract clauses should focus on motivating actions to succeed versus punishment if failure occurs.

Solutions

Contractors not only provide a vital service but also may be the only individuals trained to operate a particular weapon system. Consequently, they may play an important role in combat operations. However, their use creates unique challenges for the deployment commander, including deployment preparation, command authority, and combatant status. There are several methods to deal with the issues raised by the use of contractors in combat operations, which would assist deployment commanders in conducting their mission. Three methods or solutions will be discussed: do nothing and accept the risks of current practices, use a sponsored reserve, or seek to change Hague and Geneva conventions by creating a combatant contractor legal category.

Do Nothing and Hope for the Best

The first solution is to keep the current practice and accept the risks associated with UAV contractor pilots who conduct combat operations. This may seem a reasonable choice, particularly if military commanders always rely on reachback operations in conducting UAV operations. Reachback operations give the contractor the protection of stateside basing and security. Although some pilots will need to deploy to the launch and recovery base, these pilots will control the vehicle only in friendly or neutral territory before handing off control of the vehicle to CONUS-based pilots. Therefore, their status could be considered noncombatants. Of course, this solution would work as long as the United States continues to win these small-scale contingencies and the contractor pilots' risk of being captured remains low.

Sponsored Reserve Solution

Similar to changing the rules is to use what the Air Force Directorate of Strategic Planning has termed sponsored reserve. The Air Force defines sponsored reserve as:

...a contract or agreement between the military and a providing contractor or government agency, which includes a provision that a specified portion of the provider's workforce will be members of a military reserve component (Guard or Reserve) as a condition of employment.⁸⁰

The development of a sponsored reserve involves a variety of issues, ranging from legal to fiscal.⁸¹ Simply stated, members of the contractor's workforce would be designated as part of the DoD's inactive reserve force. These contractors turned reservist would be recalled when needed for contingency operations in accordance with established regulations. Prior to their recall, the selected contractors would be trained per standard mobility requirements. This policy would be in effect until the Air Force

establishes the initial operating capability for the weapon system. A similar policy is already in effect in the United Kingdom. The United Kingdom Sponsored Reserve Act requires each defense contractor “to have a specified number of its employees participate as military reservists.”⁸²

Rule Change: A Lengthy Process

A long-term solution—the opposite of doing nothing—is to change the rules that govern the Law of Armed Conflict and those that determine combatant status. The Law of Armed Conflict results from “Hague Law (named for treaty negotiations held over the years at The Hague, Netherlands) and Geneva Law (named for treaty negotiations held over the years at Geneva, Switzerland).”⁸³ The Hague Conventions were drafted in 1899 and 1907, and the latest Geneva Conventions were drafted in 1949. One alternative may be to create a combatant contractor legal category. Such changes need to address command relationships and disciplinary authority. More important, worldwide approval would be necessary, and such an agreement could take years.

Recommendation

These are three solutions available in order to utilize contractors as UAV combat pilots. The Air Force and DoD need to change their current procedures, which rely on contractors to conduct combat or combat support missions. The *do nothing* and rule change options are not appropriate. The best overall solution is not to use contractors in combat as combatants. Reality, however, requires contractors so the sponsored reserve option needs to be implemented.

commanders have taken an oath in which they have agreed to support and defend the Constitution of the United States. By allowing contractors to conduct combat operations, military commanders are violating this oath, the Law of Armed Conflict, and other treaties that the United States has agreed to abide by. These commanders may be punished within the context of the UCMJ. These same commanders might be tried for lack of command responsibility for directing these contractors to conduct combat operations. This failure to obey the laws of armed conflict also could jeopardize the US leadership position on the world stage, especially if the United States intended to criticize other countries’ wartime procedures or any LOAC violations.

The extreme of taking the do-nothing approach is trying to change established military traditions, customs, and laws. These laws, as stated in the Hague and Geneva conventions have, “developed over the centuries through the customs of States”⁸⁷ and have withstood the test of time. These rules originally were created to distinguish military personnel from civilians and are just as applicable today as they were in previous wars. Although recent terrorist activities have made conducting military operations difficult, the moral and legal obligations of distinguishing between military members and civilians are still important.

The best solution is to develop and then implement the sponsored reserve plan. A sponsored reserve would alleviate all the problems identified earlier, ranging from deployment spinup to compliance with the Law of Armed Conflict. Military commanders would have the option to select those individuals in the contractor workforce whom they want to train for sponsored reserve duty and assign those individuals to the appropriate

The Air Force and DoD need to change their current procedures, which rely on contractors to conduct combat or combat support missions.

Doing nothing is an unacceptable option. As stated earlier, UAV contractor pilots who conduct combat operations could be considered unlawful combatants. Although they will retain POW status if captured, they could be tried for war crimes or other criminal acts. With the recent establishment of the International Criminal Court, these contractors could be persecuted anytime they leave the safe confines of the US protective borders. “Thus, the person sought by the International Criminal Court would be restricted in his or her travels overseas.”⁸⁴ Contractor UAV pilots who conduct combat operations would be unable to travel internationally without fear of criminal prosecution. Furthermore, chief executive officers of the company employing these contractors may not want their employees labeled war criminals and do not want to soil the company’s public image.

The do-nothing option is inappropriate for the contractors, and failure to follow the rules would affect the deployment commander. The Constitution describes—in Article VI, clause 2—how ratified treaties become the law of the land.⁸⁵ “The United States is committed to following the Law of Armed Conflict,”⁸⁶ as are its military commanders and citizens. Furthermore, military

mobility positions. By identifying these individuals early in the program, the unit deployment manager could prepare training schedules and stockpile equipment, eliminating all the unknowns that existed with preparing a majority contractor force with minimal notice. “Contractual agreements regarding military training requirements, military performance standards, and mobilization requirements must be explicit to allow the contractor the tools needed for planning and scheduling.”⁸⁸ If the weapon system the contractors were developing were needed in combat, the sponsored reserve personnel would be recalled as reservists. Since these reservists are part of the military, the deployment commander would have UCMJ authority. All players need to fall under the purview of the UCMJ, where all individuals can be treated fairly and equally.

The DoD would use only those contractors who are willing to participate in this policy. The contractors would be reluctant to turn down potential large government weapon system contracts just because of this policy. Of course, the military would need to find ways to compensate the contractors if they are contractually obligated to support combat operations. It is very unlikely that

a well-paid contractor would be willing to take a significant pay cut to conduct combat operations. The majority of these contractors may have served 20-plus years in the military already, with numerous deployments. Although the contractors who supported the Global Hawk deployments were all volunteers, they were paid in excess of their military counterparts.

The implementation of a sponsored reserve would benefit the Air Force since it would guarantee combat support of a weapon system well before the system is operational or properly manned by the Air Force. A combat deployment should benefit the contractor through the successful demonstration of its product; failure easily could be blamed on system immaturity. Most important, as military members, UAV pilots no longer would be considered unlawful combatants, and deployment commanders would be able to focus on conducting effective combat operations, not legal ramifications.

Conclusions

According to Eliot Cohen, Professor of Strategic Studies at Johns Hopkins University's Nitze School of Advanced International Studies, "The United States may find itself making even greater use of quasimilitary contractors to do a great deal of what looks like military business; for example, flying and maintaining UAVs."⁸⁹ The use of contractor UAV pilots raises numerous issues such as predeployment training, combatant status, and command authority. Until the Air Force and the DoD fully address these issues or stop using contractors as UAV combat pilots, the combatant commander needs to understand current regulatory guidance and how it applies to contractors who conduct UAV combat operations and impacts on mission accomplishments. These issues will multiply with the weaponization of UAVs and contractor operators or pilots who conduct weapon deliveries.

Because of the limitations on contractors who conduct combat operations, the Air Force and DoD need to develop better guidelines for properly integrating contractors into combat operations or utilize a sponsored reserved program if it intends to continue using contractors. This method would remove contractors from under the distasteful banner of unlawful combatant, demonstrate the US desire to comply with international laws, and provide the deployment commander with a more functional fighting force. This option would best serve the needs of the US military establishment and contractor force.

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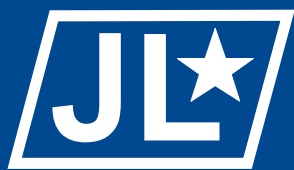
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notable quotes

Knowledge of grand tactics is gained only by experience and by the study of the campaigns of all the great captains.

—Napoleon



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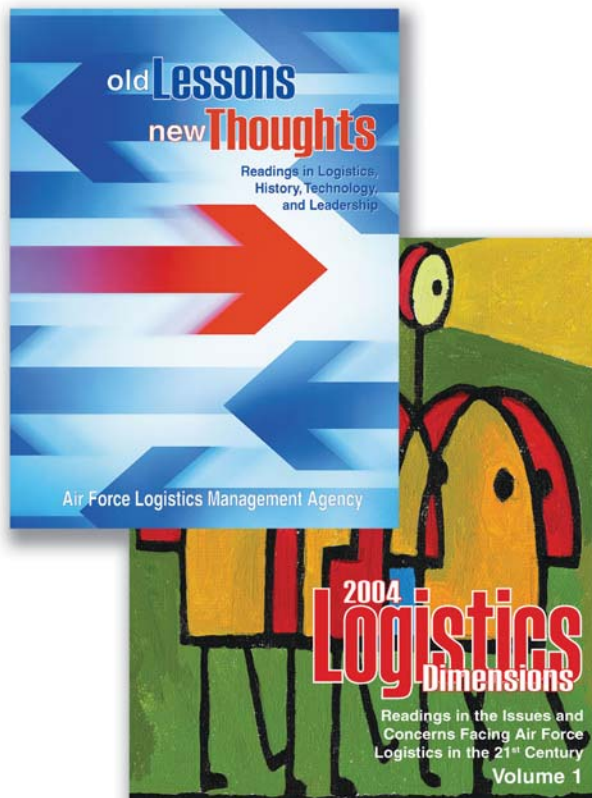
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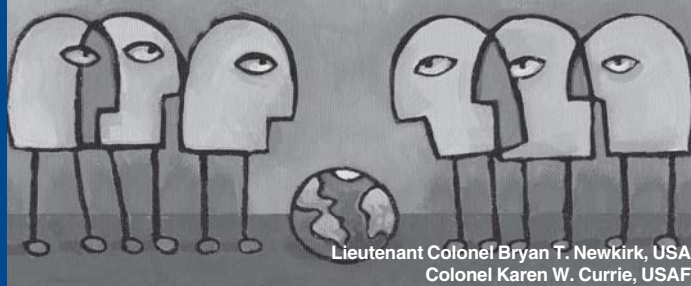
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